

ABSTRACT OF THE DISCLOSURE

An implantable stimulator(s), small enough to be located near or adjacent to an autonomic nerve(s) innervating urinary and/or gastrointestinal structures, uses a power source/storage device, such as a rechargeable battery. Periodic recharging of such a power source/storage device is accomplished, for example, by inductive coupling with an external appliance. The small stimulator provides a means of stimulating a nerve(s) or other tissue when desired, without the need for external appliances during the stimulation session. When necessary, external appliances are used for the transmission of data to and/or from the stimulator(s) and for the transmission of power, if necessary. In a preferred embodiment, the system is capable of open- and closed-loop operation. In closed-loop operation, at least one implant includes at least one sensor, and the sensed condition is used to adjust stimulation parameters.